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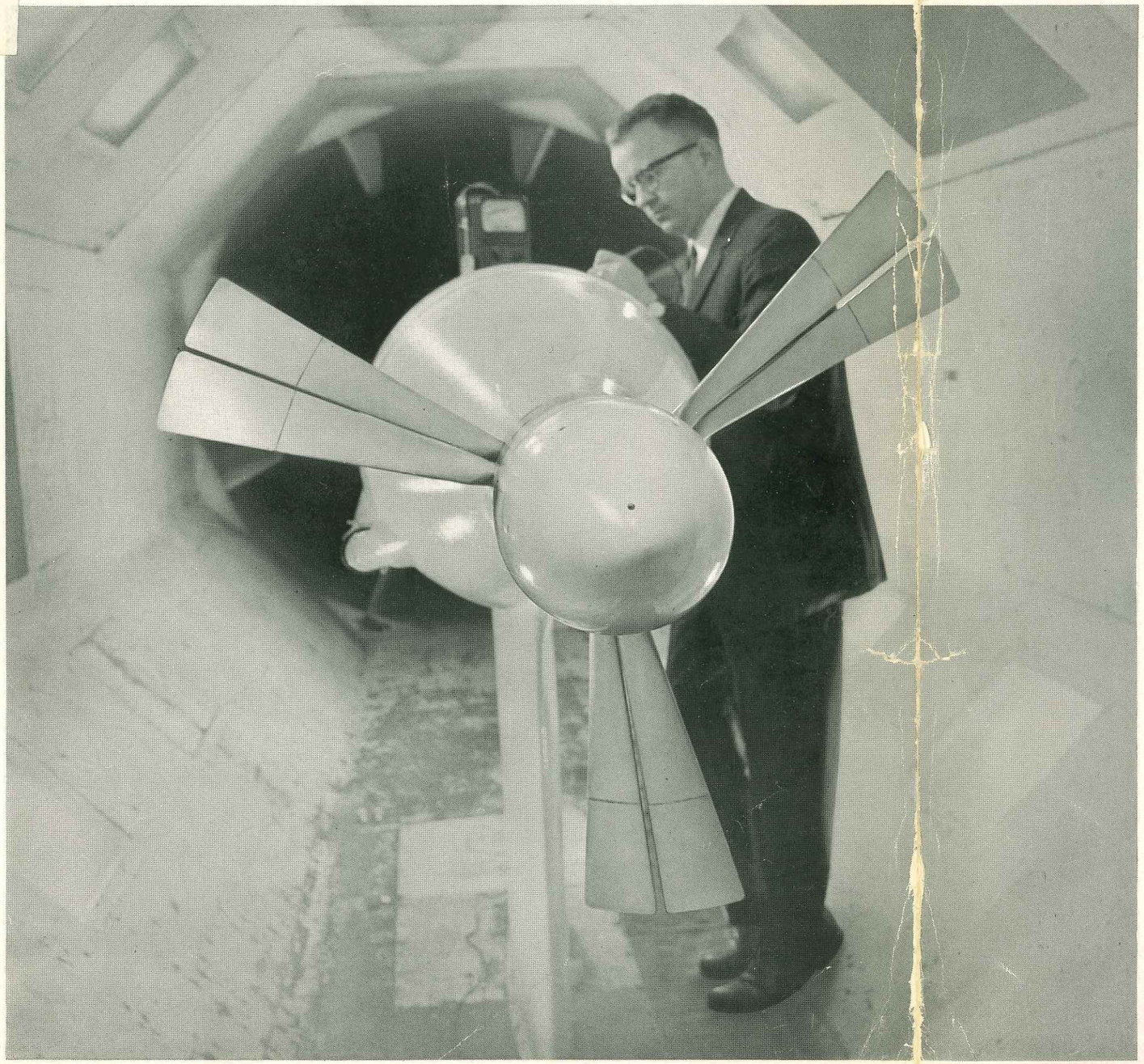
THE VARIABLE CAMBER PROPELLER



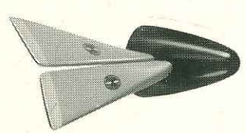
New Hamilton Standard propeller will provide the equivalent of camber adjustment for every flight condition . . . offers major performance improvements for future aircraft

A new Hamilton Standard propeller, now under development for the Navy, will eliminate the historic compromise in blade design between the need for a high-lift airfoil for take-off and a low-lift airfoil for cruise. The propeller achieves this advance without a radical departure from established, fixed geometry blade design. By changing the relative angle of paired blades, the propeller produces an effect similar to the flap action of a wing. Result: the new Hamilton Standard propeller will automatically simulate the most efficient camber for *every* flight condition . . . take-off, climb, cruise and landing.

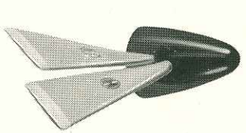
POTENTIAL: the new propeller will make possible a variety of important performance options for many types of future aircraft. Present studies, for example, show the propeller could provide the following performance increases:

	VTOL AIRCRAFT	HIGH-SPEED TRANSPORT	AEW/ASW AIRCRAFT
Payload	40-50%	30-40%	—
Range	30-40%	20-30%	—
Endurance	—	—	15-20%

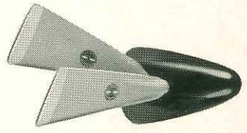
UTILIZING SIX OR EIGHT LOW-CAMBER BLADES, mounted in pairs on a common hub, the propeller would achieve the effect of a camber change by altering differentially the relative angle of each blade set. Such adjustments are controlled by constant-speed governing.



FOR TAKE-OFF, blade angles are adjusted differentially so that each pair of blades simulates a high-camber surface for maximum thrust.



FOR CRUISE, the paired blades automatically move apart and act as individual, low-camber surfaces for maximum efficiency.



FOR LANDING, the blades would assume a reverse thrust position, as shown. On VTOL aircraft, they would revert to the high-thrust configuration used in take-off.

THE "VARIABLE CAMBER" PROPELLER is one of several advanced propeller designs under development at Hamilton Standard today. Complete information on these programs is available. We welcome your inquiry.

HAMILTON STANDARD

HAMILTON STANDARD

DIVISION OF UNITED AIRCRAFT CORPORATION

WINDSOR LOCKS, CONNECTICUT

60-912

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